SUPREME COURT, U. S.

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IN THE

Supreme Court of the United States

OCTOBER TERM, 1968

No. 1086

MICR-SHIELD COMPANY, MELVIN S. BUROS, and HERBERT A. BUROS, *Petitioners,*

v.

THE FIRST NATIONAL BANK OF MIAMI

PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FIFTH CIRCUIT

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MICR-SHIELD COMPANY, MELVIN S. BUROS, and HERBERT A. BUROS, your petitioners, pray that a writ of certiorari issue to review the judgment of the United States Court of Appeals for the Fifth Circuit, entered in the above-entitled case on November 13, 1968.

OPINION BELOW

The district court wrote no opinion, entering only findings of fact and conclusions of law (R. 873-878). The opinion of the court below (Appendix A, *infra,* pp. A1-A10) is reported at 404 F. 2d 157.

JURISDICTION

The judgment of the court below (Appendix B(1), *infra*, p. A11) was entered on November 13, 1968. A timely petition for rehearing was denied on January 10, 1969 (Appendix B(2), *infra*, p. A11). The jurisdiction of this Court is invoked under 28 U.S.C. § 1254(1).

QUESTION PRESENTED

Whether, in view of the rules that (a) lack of novelty as a defense in patent cases must be proved beyond a reasonable doubt, and that (b) the ultimate question of patent validity is one of law, the "clearly erroneous" test of Rule 52(a), F.R. Civ. P., which was taken from equity practice in which a preponderance of the evidence has always been sufficient, appropriately measures the scope of appellate review in cases where novelty and patentability are in issue.

STATUTES AND RULE INVOLVED

The statutes and rule involved are set forth in Appendix C, *infra*, pp. A12-A14.

STATEMENT

Only enough of the underlying facts will be set forth to place in its setting the scope-of-review issue presented by this petition.

A. Automatic Check Processing and the Correction Problem

The standard system of automatic data processing of checks now employed by American banks is known as MICR—Magnetic Ink Character Recognition (R. 32).

The typical bank check used by that system has a strip 5/8 of an inch high along the bottom, called the "clear band," which contains MICR characters identifying the bank (known as the transit number, R. 33, 41) and the de-

positor's account number (R. 33, 136). After the check is cashed, the bank encodes in the clear band another group of MICR characters that show the amount for which the check was drawn (R. 29-30). Then the fully encoded check goes through the sorter-reader that is connected with a computer (R. 42-43). Deposit slips are handled similarly (cf. R. 906).

Comparison of any undrawn check with one that has cleared the bank will show how and where its face value was subsequently encoded on the latter.

Once a check starts on its way through the MICR system, the only non-automatic step is the encoding of the amount by operators who read the check (R. 29-30). A small but significant amount of checks are erroneously encoded because of human error (R. 55-56). Those errors create the problem to which the patent in suit was addressed.

Specifically, it was necessary to find an error correction method that would satisfy five requirements:

1. *Speed,* to avoid slowing down by manual handling the tremendous number of checks and deposit slips passing through a bank in every business day (R. 53-55, 65-66, 415, 425, 427). Thus, at the First National Bank of San Jose, California—not a monster institution by any means—there are processed in each business day about 80,000 checks and 100,000 documents in all (R. 905-906).

2. *Magnetic erasure,* to avoid reading the error into the computer; the sorter-reader machine "sees," not the optical image of the MICR characters, but only their magnetic properties (R. 35-43).

3. *Continued optical visibility of the error.* A check, being both an original bookkeeping record and a negotiable instrument, cannot be properly altered unless an

"audit trail" remains. Therefore the original encoding must remain optically visible (R. 64, 71, 1077-1079).

4. *Non-magnetic ink unaffected.* The correction must not destroy the legal features of the check such as the signature or the other writing and printing (R. 64, 237, 253, 606).

5. *Check physically unaffected.* The check must not be mutilated or changed in physical characteristics. If the dimensions of the check are changed, particularly its width or thickness, the check will jam in the delicate and highly intricate (R. 58) reading and check handling mechanism (R. 59, 421-424).

B. The Prior Art

The several prior art methods about to be briefly enumerated not only did not meet all of the foregoing requirements (R. 349, 433-434), but most of them did not maintain an audit trail (R. 64, 829, 837).

1. *Extended clear band.* This was a strip of paper pasted along the bottom of, and extending down from, an erroneously encoded check, thus providing a new clear band; the necessary MICR characters were then correctly encoded on the new clear band (R. 57-58, 88). This method was not only too time-consuming (R. 58, 246), it increased the thickness and width of the check, causing the sorter-reader to jam or to tear the check (R. 58-60, 421, 424, 426, 43[illegible]).

2. *Adhesive sticker.* This was a strip of paper glued directly over the error to mask the magnetic signal, after which the correct information was encoded on the sticker (R. 56, 89). The adhesive sticker method was unsuccessful (R. 505) on several grounds: the magnetic signal from the erroneous encoding would bleed through the paper (R. 61, 89, 246), the method was too time-consuming (R. 246), and since the sticker increased the thickness of the check, it caused problems at the sorter-reader machine (R. 61, 690).

3. *Carrier envelope.* Here the miscoded check was placed inside an envelope to mask the error, after which the correct MICR information was reencoded on the bottom of the envelope (R. 56-57, 90.) This method also failed for several reasons: too time-consuming (R. 61-62) and violative of check thickness specifications (R. 62, 424, 507). On occasion checks were scattered all over the data processing room (R. 62, 422).

4. *Substitute document.* Here a new piece of paper is used in place of the erroneously encoded check; all of the MICR information is then placed on the substitute document, which then passes through the system, after which it is mated with the original check (R. 57, 86-87). The substitute document method was unsatisfactory because of the time required and the possibility of compounding the error (R. 62-63, 420, 426).

5. *Reject Methods.* Various document reject methods, which cause the erroneously encoded check to be rejected by the sorter-reader (R. 430), prevent the error being read into the computer. One technique consists of punching out part of the encoding (R. 57, 90-91, 430), another uses a heavy film of magnetic material from an ink pad or a grease pencil to obliterate the erroneous encoding so as to make it unreadable by the sorter-reader (R. 57, 91-92, 431). These reject methods were unsatisfactory because the check must then be manually processed, which is too time-consuming (R. 64-65); or because the extra magnetic material builds up on the sorter-reader and causes it to malfunction (R. 438-444).

6. *Abrasive Erasers.* These were tried by various persons seeking to find solutions to the problem of MICR errors (R. 76, 422, 507-508), but were unsuccessful (R. 76, 422, 512); some of these injured the operatives' fingers (R. 692), some removed part of the paper as well as all trace of the original encoding (R. 422, 512); and all such erasers necessarily broke the audit trail (R. 829).

7. *Ink Eradicator.* This is a chemical bleach (R. 72, 107, 606), which produced results the opposite of those desired: the ink eradicator bleached the paper, the signature, and the non-magnetic printing, but did not affect the magnetic signal of the incorrect MICR encoding (R. 73, 79, 92). Moreover, since ink eradicators generally remove the visible image of prior incorrect figures, they encourage defalcations (R. 237). Accordingly, their use by bank employees is widely forbidden (R. 72, 237, 836-837, 913), to such an extent that possession of ink eradicator was ground for dismissal of the respondent's employees (R. 251).

C. The Banks' Unsuccessful Appeal to the Experts for Help

All of the foregoing methods being unsuccessful (R. 53, 66-67, 427, 433, 435, 441), the American Bankers Association, through its Technical Committee on Mechanization of Check Handling, on January 19, 1962, asked for help (R. 419, 343) from the Committee of Office Equipment Manufacturers (R. 337). That body later became a committee of the American Standards Association sponsored by the Business Equipment Manufacturers Association (R. 407), and will hereinafter be referred to as the BEMA-ASA Committee.

That Committee was composed of representatives of each of the manufacturers of MICR and data processing equipment used by banks, each representative being a specialized and technically qualified expert (R. 273-276, 405-411).

The members of the BEMA-ASA Committee were notified that there would be a meeting, on February 23, 1962, *inter alia,* to "Recommend a common method of handling miscoded documents" (R. 353).

At that meeting the BEMA-ASA Committee concluded (R. 344; see also R. 349 and 395) that

> "A recommended procedure was not resolved since there is no obvious solution,"

and further (R. 351), that

> "At this point, it is the opinion of X3.7.1 [the BEMA-ASA Committee] that there is no obvious solution."[1]

D. The Invention and Patent in Suit

Petitioner Melvin S. Buros, an architect, engineer, and building contractor, was particularly experienced in building banks (R. 18-20). He built for The First National Bank of Arizona the housing for one of the earliest MICR data processing systems (R. 20-21, 51, 53). In consequence he became familiar with data processing machines (R. 21, 25-26), and, when The First National Bank of Arizona began to encounter a serious problem with MICR encoding errors (R. 53, 69)—"this problem of rejects was killing us" (R. 53)—a problem that the individuals and institutions to which its officials turned were unable to solve (R. 66, 69-70), the bank in 1961 asked Buros to investigate and to find an answer (R. 53, 77).

Buros experimented for a year and a half before he made the invention involved on October 4, 1962 (R. 82-85). He immediately recognized the significance of his discovery—the removal of the magnetic qualities of the error leaving the optical ones unaltered (R. 84-85, 104-105)—and applied for a patent (R. 85), which was issued on November 26, 1963 (R. 183-195).[2] In less than a month after his

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[1] Representatives of the companies listed below were notified of the February 1962 meeting to "Recommend a common method of handling miscoded documents" (R. 353); representatives of the companies marked with an asterisk actually attended (R. 345):

Addressograph-Multigraph Corporation; DeLuxe Check Printers, Inc.; Burroughs Corporation;* General Electric Company;* The National Cash Register Company;* Remington-Rand;* Pitney-Bowes, Inc.;* Moore Business Forms, Inc.;* International Business Machines Corp.;* The Standard Register Company.*

[2] The Patent Office file, not printed for the court below, is Pl. Ex. 32 (R. 170-171).

discovery, Buros publicized it to the banking industry (R. 95. 150, 641, 643, 731, 922-923, 963, 965). One prominent member of the BEMA-ASA Committee did not hear of Buros' method until about a year after that Committee had concluded that there was no obvious solution (R. 473).

The Buros method is very simple. A solvent that will soften or dissolve the binder component of the magnetic ink (but not of any non-magnetic ink) is applied to the MICR error, thus loosening the magnetic iron particles. The loosened particles are then either spread around on the face of the check in the area of the encoding or else are absorbed into the solvent applicator, so that the particles no longer form a coherent MICR character recognizable as such by the sorter-reader machine, but will still allow the original characters to remain visible optically. Thereafter the correct MICR characters are encoded on the check, after which the corrected check is handled normally and automatically by the bank's data processing equipment. (R. 29-31, 93-94, 183-195, 477; Pl. Ex. 17 [check corrected by Buros method; not printed].)

Buros solved the problem of how to deal with MICR encoding errors, inasmuch as his method has none of the disadvantages of the prior art methods (R. 70-71, 479-480). The audit trail remains intact because the error while magnetically erased remains optically visible (R. 94-95; Pl. Ex. 17). The correction can be quickly made, after which the check can be processed in normal fashion at the equipment's full speed (R. 71). The legal efficacy of the check is not impaired because signatures and non-magnetic printing remain unaffected (Pl. Ex. 17). Finally, neither the thickness nor width of the check is changed, with the consequence that the corrected check cannot jam the sorter-reader machine (Pl. Ex. 17).

E. Commercial Success and Infringement

The Buros method was rapidly accepted by banks and Government institutions.

Within two months after Buros publicized his invention, some three-fourths of the 200 banks in the country then using the MICR system took licenses and employed the Buros method (R. 96). At the time of the trial, when the number of banks using MICR had risen to between 1150 and 1200, three-fourths of them were Buros's licensees, including 73% of the 100 banks in the country having the largest deposits (R. 96). The Treasury Department, the Internal Revenue Service, and the Federal Reserve Bank are also Buros's licensees (R. 97). Every bank in Canada that uses computers for data processing is licensed under the Canadian patent corresponding to the one in suit, and the same is true of Australia (R. 97). The Buros method is recommended by the General Electric Co. and by the National Cash Register Co. (R. 97, 436-437).

Respondent promptly adopted the Buros method once Buros disclosed it to the bank officers (R. 262-263; Pl. Ex. 18 [correspondence file, not printed]). Today respondent uses this method (R. 232-233, 270-273) to correct between 85 to 90 per cent of the 400 to 500 documents it miscodes each day (R. 265-266).

We do not understand that respondent seriously denies infringement; its defense at the trial and in the court below was limited to asserting the invalidity of the Buros patent.

F. Summary of the Evidence Underlying the Findings of Fact

Three live witnesses were called at the trial, as against twenty witnesses by deposition; the depositions and the documentary exhibits make up perhaps 75 per cent of the

record on appeal.[3] Following the trial, the district court made seven findings of fact. These are briefly set forth below together with, in view of the sole issue presented by this petition, the evidence bearing on each finding.

1. Finding 1 (R. 874) summarizes the patent (R. 183-195), but without ever mentioning its teaching that the original erroneous encoding remains optically visible (R. 189, col. 7, lines 17-23 and 43-47; R. 189, col. 8, lines 63-67).

2. Finding 2 (R. 874-875) cites three patents teaching the removal of ink by application of a solvent, and then finds the solvent approach "obvious" because the banker who first directed petitioner Buros to the problem mentioned ink eradicator. All three of those patents were cited as references in the Buros patent (R. 191).

The record shows that the use of ink eradicator was anathema to bankers because of the opportunities it offered for defalcation (R. 64, 237, 251, 836-837); that the use of ink eradicator by removing all trace of the original encoding broke the audit trail (R. 64, 836-837); that, eight months before Buros' invention, the most knowledgeable MICR experts in the country formally resolved that "there is no obvious solution" to the problem of handling miscoded MICR documents (R. 344, 351); and that the banker who first directed Buros to the problem had himself found that ink eradicator did not work (R. 80).

3. Finding 3 (R. 875) cites two additional patents, "both of which name solvents recommended in plaintiffs' patent. The Court finds that selective solvents for magnetic ink were well known prior to the date of plaintiffs' discovery of the process." This finding does not disclose that the simple but complete removal of the magnetic ink did not

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[3] This is only a rough estimate, as many of the exhibits appear only on alternate pages. But the bulky Patent Office record (Pl. Ex. 32, R. 170-171) was not printed.

solve the problem (*supra,* pp. 5, 6), nor that the Kulesza patent it mentioned was cited in the Buros patent (R. 191), nor that the Newman patent (R. 1109-1111) it mentioned deals with a process for making carbon copies that have magnetic characters, nor that the mechanism of this patent is the exact opposite of the Buros patent.

4. Finding 4 (R. 875-876) states that the IBM Corporation "had thoroughly explored the process and had anticipated all of the material discoveries of plaintiffs, including the facts that solvents for magnetic ink had little effect on other inks or on safety features on checks and that all magnetic ink did not have to be removed prior to re-encoding."

The record shows that Mr. R. L. Moore of IBM, who was directly in charge of that corporation's investigations of the MICR correction problem (R. 1033-1035), was present at the BEMA-ASA Committee on February 25, 1962, where it was concluded (R. 344) that "A recommended procedure was not resolved since there is no obvious solution." Mr. Moore testified on deposition that during 1959-61 IBM investigated three separate areas of correction, mechanical, "mu-metals," and chemical (R. 1034), after which "We were never able to resolve a program that IBM felt was worth marketing" (R. 1035)—although IBM was the assignee of the Kulesza patent mentioned in Finding 3 (R. 1096). The IBM experiments did not provide an MICR correction method in which the original encoding remained optically visible (R. 1043-1044, 1046, 1077, 1078, 1085, 1089), and IBM's tentative recommendations did not include the use of a solvent (R. 1081, 1087, 1092).

5. Finding 5 (R. 876) states that the patented process was demonstrated by IBM to Republic National Bank of Dallas, Texas, in March 1961, and that the bank used the process, not experimentally but publicly.

That finding was not corroborated by any documents. The bank witnesses testified that they were simply experi-

menting (R. 851, 853, 857, 865-866); that the experiments were abandoned because no solvents were satisfactory (R. 847, 858); and that they "abandoned solvents as such" (R. 858). They testified further that IBM was experimenting along with them (R. 847, 865-866); that IBM was also looking for answers (R. 812); and that ultimately IBM "didn't come up with a proper answer for us" (R. 860-861). Nothing in the record indicates whether in the course of the Dallas experiments the original erroneous encoding remained optically isible.

6. Finding 6 (R. 876) states that the First New Haven National Bank of New Haven, Connecticut used Burroughs Platen Restorer to remove magnetic ink by the process claimed by Buros, and that the bank "independently used the solvent technique as an obvious approach to the problem."

This finding rests on five depositions, uncorroborated by any documents to show what experiments were performed (Greco, R. 681; Gouger, R. 494; O'Hara, R. 765; Salzano, R. 743; Mayeski, R. 754). Those five New Haven deponents, whose testimony as to the dates of the experiments was widely inconsistent (R. 507, 514, 518, 530, 694, 752, 761, 774), did not say whether their techniques left any optical image of the incorrect encoding. The clear inference from their testimony is that they were attempting to remove every speck of the original encoding (R. 693, 695). The record shows that Burroughs Platen Restorer was a solution for cleaning type faces and other parts of business machines (R. 305, 309, 513, 526, 772).

The BEMA-ASA Committee meeting at which it was concluded that "there is no obvious solution" (R. 344, 351) to the problem of correcting MICR encoding errors was also attended by a Burroughs Corporation representative (R. 345).

7. Finding 7 (R. 876) states that engineers of the Burroughs Company used solvents to remove magnetic ink from checks at San Jose, California, and Miami, Florida, before Buros' discovery of his process.

No corroborating documents underlie that finding. The work at Miami was only experimental (R. 326) and was never reported (R. 294, 319), and respondent's officer in charge testified that he first heard of solvents from Buros (R. 263). The San Jose work was also experimental (R. 892), and the manager of that bank's data processing operations testified that he never knew of the solvent method prior to his correspondence with the petitioner Buros, after which his institution adopted the Buros method (R. 654, 656, 664-666). At San Jose, also, the earlier methods used erased the original encoding completely (R. 911).

The record shows the Burroughs experiments at Miami were directed, not to the correction problem, but to printing problems (R. 284-285, 287-288, 303-304); they proceeded on the footing that all traces of the prior encoding had to be removed (R. 308-309, 313-314); and they did not seek to leave the original encoding optically visible (R. 308-309, 313-314, 1054, 1065).

Based on the findings summarized above, the district court held (R. 876-877) the patent invalid for lack of novelty within 35 U.S.C. § 101 [*infra*, p. A12]; prior discovery by another, 35 U.S.C. § 102(g) [*infra*, p. A12]; knowledge and use by others, 35 U.S.C. § 102(a) [*infra*, p. A12]; public use more than a year before application for patent was made [35 U.S.C. § 102(b), *infra*, p. A12]; and obviousness within 35 U.S.C. § 103 [*infra*, p. A13].

The judgment of dismissal (R. 878) was affirmed on appeal (Appendix B, *infra*, p. A11), essentially on the ground that the district court's findings were not clearly erroneous (Appendix A, *infra*, pp. A1-A10).

REASONS FOR GRANTING THE WRIT

The sole issue here presented is whether the "clearly erroneous" rule, which was drawn from equity practice where proof by a preponderance of the evidence supports a finding at the trial level, sets forth the correct standard for the scope of appellate review in a patent case where (a) the defense goes to lack of novelty, an area in which proof beyond a reasonable doubt is required, and where (b) there is also interposed the defense of obviousness—i.e., whether the patent reflects invention—which under this Court's rulings is a pure question of law.

Our contention that the court below, because of its misapplication of proper standards of appellate review, was disabled from perceiving that the trial court ignored the proper quantum of proof, does not require this Court to weigh the evidence in the record, much less to determine the validity of the patent in suit. All that petitioners ask is that this Court dispel the confusion in which the proper scope of appellate review in these situations is now enshrouded, and then remand the case for reconsideration in the light of the proper standard, just as was done in varying contexts in *Commissioner* v. *Duberstein,* 363 U.S. 278, 292-293, and in *Universal Camera Corp.* v. *Labor Board,* 340 U.S. 474, 497.

First. Congress has but recently added to the burden resting on those seeking to overcome the declared presumptive validity of every patent and of every claim thereof; see 35 U.S.C. § 282 as amended in 1965 (*infra,* p. A12).[4]

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[4] The italicized portions of the first paragraph of the cited section were added by Section 10 of the Act of July 24, 1965, Pub. L. 89-83, 79 Stat. 259, 261:

"A patent shall be presumed valid. *Each claim of a patent (whether in independent or dependent form) shall be presumed valid independently of the validity of other claims; dependent claims shall be presumed valid even though dependent upon an invalid claim.* The burden of establishing invalidity of a patent *or any claim thereof* shall rest on the party asserting it."

And that burden, in a long line of decisions here, requires more than proof by preponderance of evidence where anticipation, prior use, and lack of novelty are relied on to invalidate a patent. That burden "is a heavy one, as it has been held that 'every reasonable doubt should be resolved against him' [i.e., the party setting up the defense of invalidity]." *Mumm* v. *Decker & Sons*, 301 U.S. 168, 171; *Adamson* v. *Gilliland*, 242 U.S. 350, 353; *Deering* v. *Winona Harvester Works*, 155 U.S. 286, 301; *The Barbed Wire Patent*, 143 U.S. 275, 284; *Cantrell* v. *Wallick*, 117 U.S. 689, 695-696; *Coffin* v. *Ogden*, 18 Wall. 120, 124. Indeed the rule goes back to Mr. Justice Story sitting on circuit in 1844. *Washburn* v. *Gould*, 3 Story 122, 142, Fed. Case No. 17214, 29 Fed. Cas. at 319-320.[5]

Consequently this Court has always treated with considerable reserve mere oral testimony of anticipation uncorroborated by contemporary documentary evidence (*The Barbed Wire Patent*, 143 U.S. 275, 284; *Deering* v. *Winona Harvester Works*, 155 U.S. 286, 300; *Eibel Process Co.* v. *Minnesota Paper Co.*, 261 U.S. 45, 60; 7 Wigmore, *Evidence* [3d ed. 1940] § 2065a), although it has refused to lay down an ironclad quantitative rule (*Corona Cord Tire Co.* v. *Dovan Chemical Corp.*, 276 U.S. 358, 381-382).

The trial court in the present case paid lip service to the rule of proof beyond a reasonable doubt (R. 874), but,

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[5] "Now, gentlemen, it is for you to say, whether the invention belonged to Woodworth, or whether the planing machine was known and used prior to the issue of his patent. If you think the latter, you need go no further, but find for the defendant at once. But as to this point, the burden of proof rests upon the defendant. He must satisfy you beyond a reasonable doubt, that there was a prior invention to Woodworth's, because the plaintiff has a right to rest upon his patent for his invention, till its validity is overthrown. And consequently, if it should so happen, that your minds are led to a reasonable doubt on the question, inasmuch as it is incumbent on the defendant to satisfy you beyond that doubt, you will find for the plaintiff so far as this point is concerned."

as the recital of the evidence underlying its findings indicates (*supra,* pp. 10-13), it not only did not apply that standard, but, by finding anticipation and prior use by corporations whose representatives had concurred in concluding that "there is no obvious solution," actually made its most significant findings in the face of the evidence. None of the district court's operative findings are documented, in our view because the evidence of record was so overwhelmingly the other way.

Second. The basic error committed by the court below involved, not any rejection of the reasonable doubt rule, which is firmly embedded in its own decisions (e.g., Appendix A, *infra,* pp. A7-A8; *Metal Arts Co.* v. *Fuller Co.,* 389 F. 2d 319, 321; *Southern Implement Co.* v. *McLemore,* 350 F. 2d 244, 249-250), but rather its holding that the "clearly erroneous" test of Civil Rule 52(a) (*infra,* p. A14) furnishes the correct standard of appellate review where the substantive law imposes at the trial the burden of proof beyond a reasonable doubt. In the latter situation the appelate court must assess the evidence as a whole under that rigorous standard (*Green* v. *United States,* 356 U.S. 165, 179), and "clearly erroneous" simply has no application.

This follows because the "clearly erroneous" rule, which was designed to codify "the decisions on the scope of the review in modern federal equity practice" (*Notes to the Rules of Civil Procedure,* March 1938, p. 46), is necessarily applicable only in cases where the quality of persuasion requires simply a preponderance of evidence (9 Wigmore, *Evidence* [3d ed. 1940] § 2498). Consequently it is inapplicable where, as in the present case, proof beyond a reasonable doubt measures the burden of persuasion required at the trial.

The confusion of concepts reflected in the ruling sought to be reviewed is particularly evident in the patent field, where the "clearly erroneous" rule is mechanically applied to three situations that plainly involve different standards of

trial proof: Actions under 35 U.S.C. § 145 to compel issuance of a patent and actions where the patent is held valid and infringement is in issue, in both of which preponderance suffices, and actions where the validity of the patent is attacked and invalidity under the rule discussed above must be proved beyond a reasonable doubt. The cases are collected in 5 Moore, *Federal Practice*, ¶¶ 52.03[1] and 52.05[2]; there seems no need to extend this petition by listing and classifying them here.

We ask this Court to hold the "clearly erroneous" standard wholly inapplicable in any situation where an issue must be proved at trial beyond a reasonable doubt, and to resolve the existing divergence and confusion.

Third. We are of course aware that in *Graver Mfg. Co.* v. *Linde Co.*, 336 U.S. 271, 274-275, this Court, speaking through Mr. Justice Jackson, held the "clearly erroneous" test of Civil Rule 52(a) applicable to a patent case and then went on to limit its review under the two-concurrent-findings rule. But that decision is not really a precedent in the case at bar.

1. There the controversy turned on the scope of the claims as compared with the prior art; nothing was said in the opinion about any issue requiring proof at the trial beyond a reasonable doubt; and assuredly the briefs (Nos. 184 & 185, Oct. T. 1948) never mentioned, much less discussed, the question now presented. That question was passed by without even the slightest recognition that it existed.

2. Whereas in *Graver* "the trial judge visited laboratories with counsel and experts to observe actual demonstrations * * * [and] viewed motion pictures of various welding operations and tests and heard many experts and other witnesses," here the proof was largely documentary. And after *Graver* was decided this Court has commented on the small weight to be accorded findings in a "paper

case." *United States* v. *General Motors*, 384 U.S. 127, 141 n. 16.

3. Finally, the applicability in patent cases of the concurrent findings rule, 336 U.S. at 275, was not examined in *Graver* with reference to the variety of other situations where, because of the nature of the interests involved, this Court has refused to limit its own review in the face of concurrent findings of fact below. E.g., navigability (*United States* v. *Appalachian Power Co.*, 311 U.S. 377, 403-404); waiver of right to counsel (*Von Moltke* v. *Gillies*, 332 U.S. 708); criminal contempt (*Offutt* v. *United States*, 348 U.S. 11); expatriation (*Nishikawa* v. *Dulles*, 356 U.S. 129); denaturalization (*Baumgartner* v. *United States*, 322 U.S. 665; *Novak* v. *United States*, 356 U.S. 660; *Chaunt* v. *United States*, 364 U.S. 350); disbarment (*In re Sawyer*, 360 U.S. 622); deportation (*Niukkanen* v. *McAlexander*, 362 U.S. 390; cf. *Woodby* v. *Immigration Service*, 385 U.S. 276).

Similarly, this Court reviews facts *de novo* where a constitutional standard is invoked (e.g., *Napue* v. *Illinois*, 360 U.S. 264; *Brooks* v. *Florida*, 389 U.S. 413)—and, as we are about to show, in every patent case the question of invention *vel non* involves a constitutional standard.

Fourth. In addition to the questions of novelty, anticipation and prior use in the present case, there was litigated at the trial the question of obviousness, viz., whether or not what had been discovered amounted to invention. The trial court's "findings" of obviousness (Fdg. 2, R. 874-875; Fdg. 6, R. 876), in the teeth of the evidence that the industry's experts had despairingly concluded that "there is no obvious solution" (R. 344, 351), accordingly present, not a question of fact, but one of law.

That proposition was emphasized in the concurring opinion of Black and Douglas JJ. in the *Graver* case (336 U.S. at 280):

> "While accepting the findings of those two courts on what I consider to be questions of fact, it is my view

> that the determination of the ultimate question of patentability cannot properly be classified as a finding of fact. I would adhere to this Court's earlier pronouncement that 'whether the thing patented amounts to a patentable invention' is a question of law to be decided by the courts as such."

Again, in *A. & P. Tea Co.* v. *Supermarket Corp.*, 340 U.S. 147, where Mr. Justice Jackson also spoke for the Court, Douglas and Black JJ. once more concurred on other grounds (pp. 155-156; our italics):

> "The standard of patentability is a constitutional standard; and the question of validity of a patent is a question of law. *Mahn* v. *Harwood*, 112 U.S. 354, 358. The Court fashioned in *Graver Mfg. Co.* v. *Linde Co.*, 336 U.S. 271, 275, a rule for patent cases to the effect that this Court will not disturb a finding of invention made by two lower courts, in absence of a very obvious and exceptional showing of error. *That rule, imported from other fields, never had a place in patent law.* Having served its purpose in *Graver Mfg. Co.* v. *Linde Co.*, it is now in substance rejected. The Court now recognizes what has long been apparent in our cases: that *it is the 'standard of invention' that controls.* That is present in every case where the validity of a patent is in issue. It is that question which the court must decide. *No 'finding of fact' can be a substitute for it in any case.* The question of invention goes back to the constitutional standard in any case. * * *"

The views expressed in the quoted concurrences have since then been reaccepted as the law of this Court. *Graham* v. *John Deere Co.*, 383 U.S. 1, 6, 17. But the result of the *Graver* holding to the contrary has been a well-nigh hopeless confusion in the several circuits (e.g., *Payne Metal Enterprises* v. *McPhee*, 382 F. 2d 541 (C.A. 9) (obviousness or otherwise a question of law); *Mahaffy & Harder Co.* v. *Standard Packaging Corp.*, 389 F. 2d 525 (C.A. 4) (obviousness is a question of fact)), confusion which the court below compounded: After first saying that

"while patent validity is a question of law" (Appendix A, *infra*, p. A7), it then dealt with obviousness as a question disposed of by the trial court's finding of fact (*id.*, p. A9)—a finding which on appeal was held governed by the "clearly erroneous" test (*id.*, p. A7).

Fifth. The invention here involved was not one developed in the research facilities of a mammoth corporation; in this area the experts of the corporate giants had pessimistically concluded that "there is no obvious solution" (R. 344, 351). But what was nonobvious to the initiated in the industry was discovered by an outsider whose professional background was wholly different. What he invented "did not, for years, occur in this light to even the most skillful persons. It may have been under their very eyes, they may almost be said to have stumbled over it; but they certainly failed to see it, to estimate its value and to bring it into notice." *Webster Loom Co.* v. *Higgins*, 105 U.S. 580, 591. This Court's reports bear witness to many other instances of inventions that seemed simple in hindsight but never occurred to those most skilled in the art; e.g., *Krementz* v. *Cottle Co.*, 148 U.S. 556; *Expanded Metal Co.* v. *Bradford*, 214 U.S. 366; *Eibel Process Co.* v. *Minnesota Paper Co.*, 261 U.S. 45; and, most recently, *United States* v. *Adams*, 383 U.S. 39. In those cases—as in this one—the invention truly represented the elusive spark of creative genius.

It would be a pity if an inventor such as the petitioner Melvin Buros, who successfully surmounted obstacles found insuperable by the most knowledgeable experts in the art, and whose patent met with instant and widespread commercial success, should be deprived of the rewards of his discovery because of the application of an erroneous standard of proof at the trial and of erroneous standards of review on appeal.

For, paradoxically enough, while the opinion below recited the experts' failure and their conclusion of "no obvious solution" (Appendix A, *infra*, p. A3), while it fur-

ther recited "the mistaken idea of the IBM operators that all trace of the magnetic particles must be removed to enable a proper re-encoding" (*id.* at p. A9), it supports as a finding of fact "the obvious nature of the discovery" (*ibid.*) when it is perfectly plain that Melvin Buros' discovery that the use of a solvent which would leave the erroneous encoding optically visible was the key to the problem—the key that had utterly eluded the most expert technicians in their respective corporate research laboratories.

CONCLUSION

For the foregoing reasons it is respectfully submitted that this petition for a writ of certiorari should be granted.

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